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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,834	07/30/2003	Leo Strawczynski	9-13528-194US	7275
20988	7590	11/01/2006	EXAMINER	
OGILVY RENAULT LLP 1981 MCGILL COLLEGE AVENUE SUITE 1600 MONTREAL, QC H3A2Y3 CANADA			TRAN, DZUNG D	
			ART UNIT	PAPER NUMBER
			2613	

DATE MAILED: 11/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

ST

<b>Office Action Summary</b>	<b>Application No.</b> 10/629,834	<b>Applicant(s)</b> STRAWCZYNSKI ET AL.	
	<b>Examiner</b> Dzung D. Tran	<b>Art Unit</b> 2613	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 July 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Specification*

#### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Agazzi U.S. Publication no. 2002/0012152 in view of Hendow U.S. Publication no. 2005/0078957.

Regarding claims 1, 22, 34 and 40, Agazzi discloses in Figure 9, a method/apparatus of monitoring performance of an optical communications system the method/apparatus comprising:

optical communications system having a data path (see Figure 9) including an Analog-to-Digital (A/D) converter 108 for sampling the channel signal at a predetermined sample rate at least equal to a baud rate of the channel to generate sequential N-bit samples respectively indicative of a detected analog value of the channel signal ( page 4, paragraphs 0089, 0091, 0096, page 6, paragraph 0130);

a channel monitor adapted to the data path to obtain sample data generated by the A/D converter 108 within a predetermined time interval, the sample data comprising sequential N-bit samples respectively indicative of a

Art Unit: 2613

detected analog value of the channel signal ( page 4, paragraphs 0089, 0091);  
and

a DSP 110 for calculating at least one performance parameter of the optical communications system based on the sample data, independently of the data decoder (page 4, paragraphs 0090, 0091, 0096). Agazzi does not specifically disclose a sample memory for storing sample data corresponding to a set of N bit samples generated by the A/D converter. Hendow discloses a sample memory 274 adapted to receive successive samples from the A/D converter 278 and a controller 270 adapted to control the sample memory to store samples received during the predetermined time interval. .

At the time of the invention was made, it would have been obvious to a person of ordinary skill to include a sample memory 274 taught by Hendow in the system of Agazzi. One of ordinary skill in the art would have been motivated to do that in order to detect the symbols conveyed by the channel signal, and thereby recover the original digital data stream.

Regarding claims 6-7, 23-24, 38-39 and 43-44, Agazzi discloses the predetermined time interval corresponds with a selected number of symbols conveyed by the channel signal and respective time intervals in which sample data is obtained from first and second data paths of the optical communications system at least partially overlap in time (page 4, paragraph 0102, page 5, paragraphs 0103, page 6, paragraph 0130, page7, paragraph 0134, 0137).

Regarding claims 8 and 25, Agazzi discloses calculating at least one performance parameter comprises steps of: identifying a period during which the

Art Unit: 2613

respective time intervals overlap and correlating respective sample data obtained from each data path during the identified overlap period (page 7, paragraphs 0144 to 0150).

Regarding claims 9 and 26, Agazzi discloses the respective time intervals are substantially simultaneous (page 7, paragraphs 0144 to 0150).

Regarding claims 10 and 17, Agazzi discloses calculating at least one performance parameter comprises a step of reconstructing a portion of the channel signal received by the A/D converter during the predetermined time interval, based on the sample data and correlating first and second reconstructed portions of the channel signal received during respective first and second time intervals (page 7, paragraphs 0144 to 0150).

Regarding claims 11 and 13, Hendow discloses in figure 7, channel monitor comprises: a sample memory 274 adapted to receive successive samples from the A/D converter 278 and a controller 270 adapted to control the sample memory to store samples received during the predetermined time interval.

Regarding claim 14, Agazzi discloses in Figure 19 for identifying errored symbol within the channel signal.

Regarding claim 15, it is well recognized in the art that the sample rate is designed to satisfies Nyquist's theorem.

Regarding claim 27, Agazzi discloses the data path comprises a data decoder (e.g., 1022 of Figure 10B).

Regarding claims 12 and 28, Agazzi discloses a controller (e.g., optional processing of Figure 10B) adapted to compensate a delay between generation of sample data and generation of a corresponding bit of the recovered data stream by the decoder.

Regarding claim 29, Agazzi discloses data bus adapted to simultaneously convey a signal from the processor to each one of parallel channel monitoring and correlating respective sample data obtained from each data path during the identified overlap period (page 7, paragraphs 0144 to 0150).

Regarding claims 20-21 and 31, Hendow discloses a channel monitor adapted to tap the data path to obtain sample data generated by the A/D converter 278 within a predetermined time interval, the sample data comprising sequential N-bit samples respectively indicative of a detected analog value of the channel signal (figure 7, page 4, paragraphs 0043, 0058).

Regarding claim 32, Examiner take an official notice that coherent optical receiver is well recognized in the art.

Regarding claims 2-5, 18-19, 35-37 and 41-42, Examiner take an official notice that sampling the E field of the channel signal comprises step of sampling at least two orthogonal component of the channel signal wherein the orthogonal component is polar signal component is well recognized in the art.

***Conclusion***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Jeong U.S. Patent no. 6,341,024. Channel monitoring apparatus in a wavelength division multiplexing system

b. Shin et al. U.S. Patent no. 6,754,415. Device for setting reference wavelength in optical channel monitoring module

c. Cova U.S. Publication no. 2002/0171485. Digitally implemented predistorter control mechanism for linearizing high efficiency RF power amplifiers

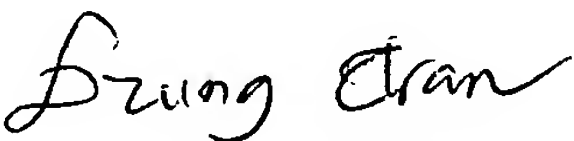
4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dzung D Tran whose telephone number is (571) 272-3025. The examiner can normally be reached on 9:00 AM - 7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan, can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2613

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dzung Tran  
10/18/2006

  
DZUNG TRAN  
PRIMARY PATENT EXAMINER